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NOV 17 2006

REMARKS

Claims 1-63 are pending. Independent claims 1, 11, 23, 28, 38, 45, and 54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu (US005883901A) in view of Quigley (US006785564B1). The independent claims have been amended to recite wherein the headend or headend processor "is configured to identify the activation window corresponding to the time the cable modem receiver circuitry is enabled prior to transmitting the second message during the activation window."

Chiu describes a Signal Conversion System (SCS) connected to a cable modem. The Signal Conversion System (SCS) uses the Disable/Enable Cable Modem Request subframe type "to turn on and off a particular cable modem 113. The subframe type is 0x03 for Disable and 0x05 for Enable. The Disable/Enable CM subframe is a six-byte MAC modem address field that uniquely identifies the particular CM 113 the frame is directed to." (Col 12, Lines 45-51) The Examiner notes that "Chiu does not disclose disabling the cable modem for periodic intervals separated by activation windows."

Quigley describes reducing "the power requirements of cable modem 16 or other customer premise equipment by placing equipment attached to the cable modem into a low power or power off state. In the described exemplary embodiment, the forward tuning path and demodulation circuits of the cable modem are disabled in the low power state and two way communications are suspended. Prior to entering the low power state, cable modem 16 sets a wake up timer, the expiration of which terminates the low power state, returning cable modem 16 to full power, active operation. In an exemplary embodiment, the duration of the wake up timer may be designed to provide on the order of about a 90% sleep interval and a 10% active interval. A low power sleep interval may be in the range of about 1-4 seconds. In the described exemplary embodiment, cable modem 16 reduces its average power by continuously establishing a low power state. Cable modem 16 returns to an active state when the sleep timer expires. However, upon returning to the active state cable modem 16 monitors the downstream traffic for local commands as well as the activity level of locally attached devices. If the low activity condition persists, cable modem 16 requests another sleep interval." (Column 4, Line 56 - Column 5, Line 11).

It is respectfully submitted that even if there is sufficient motivation to combine, Chiu and Quigley do not describe all of the elements of the independent claims. The independent claims recite "instructions from the headend to disable the cable modem receiver circuitry for periodic intervals separated by activation windows." The Examiner acknowledges that Chiu does not "disclose disabling the cable modem for periodic intervals separated by activation windows." Chiu does describe a headend sending conventional instructions to a cable modem, but not "instructions from the headend to disable the cable modem receiver circuitry for periodic intervals separated by activation windows." Quigley similarly does not disclose "instructions from the headend to disable the cable modem receiver circuitry for periodic intervals separated by activation windows." Quigley explicitly describes "Prior to entering the low power state, cable modem 16 sets a wake up timer, the expiration of which terminates the low power state, returning cable modem 16 to full power, active operation." This is performed without any coordination with the headend. In fact, Quigley goes into detail describing a variety of ways to disable a cable modem, but none teach or suggest any coordination with a headend.

Consequently, the headend may still be transmitting data to the cable modem when the cable modem is in its low power state and data transmissions can be lost. Furthermore, having a headend send "instructions to disable the cable modem receiver circuitry for periodic intervals separated by activation windows" is not an obvious modification of a combined Chiu and Quigley system because having a headend send instructions can increase complexity as it includes coordination with a headend. According to various embodiments, the techniques of the present invention recognize that increased coordination with a headend can increase system complexity, but the headend then has information about which cable modems have receiver circuitry disabled for which periodic intervals. The headend then, for example, can transmit data to cable modems at selected times to limit the chance of data loss. The Quigley system on the other hand has no headend involvement and the headend transmits without knowing whether cable modem receiver circuitry is enabled or not.

Even though the independent claims are believed allowable in their current form, the claims are being amended for further clarification. The independent claims are being amended to recite wherein the headend or headend processor "is configured to identify the activation window corresponding to the time the cable modem receiver circuitry is enabled prior to transmitting the second message during the activation window."

Neither Quigley nor Chiu teach or suggest a headend identifying any activation window. Neither Quigley nor Chiu teach or suggest a headend that has any activation window information. Instead, the Quigley headend transmits without identifying "the activation window corresponding to the time when the cable modem receiver circuitry is enabled prior to transmitting." The Quigley head end is believed to transmit without any knowledge of when the cable modem receiver circuitry is enabled.

In light of the above remarks relating to independent claims the remaining dependent claims are believed allowable for at least the reasons noted above. Applicants believe that all pending claims are allowable. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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